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Computer and Information Services

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Computer Center

Summer Quarter Talks

The Computer Center staff will give twenty-three talks at the beginning of this quarter to acquaint users with the various facilities of the VM/CMS timesharing and MVS batch systems available on the mainframe and with the services available in the Center's and the campus microcomputer labs. In addition, Prof. Peter Lewis (OR) will present two introductory talks about interactive statistical/graphical services using APL.

General-Interest Talks

The following five talks will be given in Ingersoll 122. ***Signup is not required for these sessions.***

Introduction to VM/CMS

1310 Wednesday	8 July	Dennis Mar	In-122
1310 Tuesday	14 July	Dennis Mar	In-122

This talk is given twice. It assumes no prior knowledge of the Center's computer, and covers use of the 3278 and related terminals, how to logon and logoff, use of the function keys, online help files, and various general-purpose commands. ***It is strongly recommended for all new users of the Center and covers information which may not be provided in an introductory programming class.*** Be sure to bring a copy of Technical Note VM-01, *User's Guide to VM/CMS at NPS*, provided when a new user registers at One-Stop-Check-in or in In-147. *(Those without computer experience may wish to consider instead the Center's Hands-on Mainframe talk.)*

Introduction to XEDIT

1410 Thursday	9 July	Helen Davis	In-122
1410 Wednesday	15 July	Dennis Mar	In-122

This talk is presented twice. It provides elementary information about the XEDIT full screen editor. It covers methods for creating and changing programs and other files. Use of the PF keys and HELP facility in XEDIT are mentioned. The talk assumes little or no familiarity with XEDIT, but prior attendance at *Introduction to VM/CMS* is recommended. *(Those without computer experience may wish to consider instead the Center's Hands-on-Mainframe talk.)*

Introduction to E-Mail

1410 Thursday	16 July	Caroline Miller	In-122

This talk provides information on the electronic mail services supported by the Computer Center. Every mainframe user at NPS has access to two wide area networks: the academic BITNET (Because It's Time NETwork) and the Internet (via DDN, Department of Defense Network, or BARRNet, the Bay Area Regional Network). Topics to be discussed include procedures for sending a short note to a local or remote computer, how to transfer files between different computers, and what information is available to assist in finding peoples' network addresses. A demonstration of E-Mail services is integral to the presentation.

I N S I D E

ding the talk, but our experience is that users are more comfortable after a brief familiarization session. The use of the electronic mouse in document preparation will be demonstrated.

Introductory and Word-Processing Mainframe Talks

Introduction to GML and GThesis

1410 Monday 13 July Larry Frazier In-119

Generalized Markup Language (GML) provides a set of commands that simplifies the task of using ScriptVS to prepare papers and other research publications on the mainframe. It takes care of footnotes, figures, tables, and mathematical formulas and will also generate a Table of Contents for your paper. Graphics from Disspla and Grafstat may be printed directly with GML laser printer output. ***Attendees should have completed the VM-02 tutorial and be familiar with the timesharing system, VM/CMS.*** GThesis was developed at NPS as an addition to Script; it simplifies producing a thesis to NPS standards. The talk will be useful only to those with some familiarity with Script (GML). *Attendees should read the first three chapters of TN VM-14, the GThesis documentation, (available in In-146), and bring this reference to the talk.*

Intro to the Formula Formatter

1410 Monday 20 July Larry Frazier In-119

Those using GML and GThesis on the mainframe to prepare theses or other documents, and requiring the formatting of mathematical formulas, should attend this presentation. It is possible to learn IBM's formula formatter using the printed documentation, but many find the learning process simpler with this talk. Square roots, multi-line brackets, matrices, complex sub- and super-scripts, and much more are all formatted automatically by this package. ***Attendees should be familiar with GML (Script) and the timesharing system.*** Those using WordPerfect may wish to attend one of the Center's talks on WordPerfect 5.1 features (WordPerfect Tables, Equations & Graphics), which include its version of formula formatting.

Hands-on Mainframe

0910 Thursday 23 July Helen Davis In-364E

This session is designed for those who find the thought of learning to use the mainframe computer a bit intimidating; it combines the information from two separate lectures, *Introduction to VM/CMS* and *Introduction to XEDIT*. This is a single two hour slow pace class in a terminal room where you can work and interact with CMS, FILELIST, RDRLIST, and XEDIT during the session. Class size is limited to 12 due to the number of terminals.

Specialized Mainframe Talks

Introduction to Minitab

1510 Monday 20 July Dennis Mar Ro-260

Minitab is an interactive statistical computing system available on VM/CMS. It is designed for moderate-size data sets which can be stored on a CMS A-disk. Minitab is quick and especially useful for exploring data, plotting, and regression analysis. ***Attendees should be familiar with the VM/CMS timesharing system.***

Introduction to AGSS (Grafstat): Ro-260

1510 Thursday 16 July Prof. P.A.W. Lewis Ro-260

This talk gives a brief introduction to AGSS (A Graphical Statistical System, formerly known as GRAFSTAT at NPS). AGSS is an APL package for interactive scientific-engineering plotting, graphics output development, applied statistics, and data analysis. The program features a full-screen interface, complete on-line help, color graphics capability and effectively combines computation and graphics. Complete routines for least squares fitting, fitting of probability distributions, design and implementation of quality control charts, regression and time series analysis are available.

Introduction to SAS

1510 Thursday 23 July Dennis Mar Ro-260

SAS, the Statistical Analysis System, is a flexible program for handling all phases of data analysis: retrieval, data management, statistical analysis, and report writing. It has excellent features for merging and subsetting data sets. The speaker will describe

...u get the message

```
230-COMMON logged in; working directory = COMMON 191
(ReadOnly)
230 write access currently unavailable due to other links
```

you can *get* files but you will not be able to *put* files. Try again later if you need write access.

Putting Files on COMMON from Another CMS Userid

To make files available for FTP by remote users, a mainframe user must copy the file(s) to COMMON. (Remote users can't FTP to your account.) To do this, simply FTP to COMMON as described above, from your CMS userid. All that's necessary to be able to FTP from your CMS account is to type the command

```
ddnlink
```

The file is then available to remote users for FTP or to other local users who link to COMMON. Notify the remote user that files are ready for transfer. (E-mail is good for telling other users that "everything is set".) Note that any files you place on the COMMON disk can be read by anyone who has a mainframe account or knows the FTP address of the Center mainframe and knows about COMMON. This Bulletin is mailed to other schools.

Copying Files From COMMON to a Mainframe Account

Local users can copy files from this account in read only mode by issuing the command

```
linkto common
```

Note the filemode of COMMON (the message will appear on your screen). Then use the CMS COPY command to copy a file from COMMON to a disk on your userid. In this example, COMMONis attached as the B disk.

```
copy yourdata file b = = a
```

If you would like to copy the file to an MVS disk, use the MVSDISK exec. This exec calculates the amount of space, the blocksize, and the logical record length, and then copies the file to an MVS disk. The syntax for this exec is:

```
MVSDISK filename filetype filemode
```

Helen Davis

IMSL Ver. 2.0 Library Available for Testing

Version 2.0 of the IMSL library is available for testing on CMS. All routines are compiled under VS FORTRAN V2.4 at OPT(3). 27 routines or functions that were available in Version 1.1, and are deleted in V2.0, are still available in the V2.0 source libraries. 25 deleted routines and functions (3 with name changes) were identified in the May 26 issue of the Bulletin. There are actually 27 deleted routines (X1RBLA has also been deleted). Three fix routines (E7CSF, DE7CSF, TDATE) have been applied to date. In V2.0 the MATH and SFUN libraries have been combined.

Users wishing to test their FORTRAN procedures with the new library may access it by issuing the following commands from CMS:

```
LINKTO IMSL
GLOBAL TXTLIB IMSLIB1 IMSLIB2 IMSLIB3 VSF2FORT CMSLIB ...
GLOBAL LOADLIB VSF2LOAD
```

To use the BLAS Library routines (Basic Linear Algebra Subprograms), code the GLOBAL TXTLIB as follows:

```
GLOBAL TXTLIB IMSLIB1 IMSLIB2 IMSLIB3 IMSLBLAS VSF2FORT
CMSLIB ....
GLOBAL LOADLIB VSF2LOAD
```

Note that CMSLIB above is part of the GLOBAL TXTLIB command on the previous line. Users may view or obtain the source code for the IMSL V2.0 library (including the BLAS routines) by linking and executing a temporary Exec. From CMS issue:

```
LINKTO IMSL
LIBSOUR2
```

The MVS V2.0 libraries are also available. To use them, override the default by coding IMSL20. Thus, to compile a FORTRAN program with the catalog procedure VSF2CLG using V2.0 of the IMSL Library, the procedure is:

```
// EXEC VSF2CLG,IMSL=IMSL20
```

To use the BLAS Library with the IMSL V2.0 Library, the procedure is:

```
// EXEC VSF2CLG,IMSL=IMSL2B
```

We plan to make V2.0 the default version of the IMSL library in the MVS catalog procedures during the Christmas break. Presently the default version of the library is IMSLSP which is a 1984 version of the

BNAME statement with *libref* and *'mvs-data-set-name'*, as in the above example. Additionally, you must specify

- the disposition of the data set. For new data sets to be cataloged,

```
DISP=(NEW,CATLG,DELETE)
```

- the output device (MVS disk is named SYSDA) onto which the library is written,

```
UNIT=SYSDA
```

- and the amount of space needed to store this file.

```
SPACE=(TRK,(#primary,#secondary),RLSE)
```

This is measured in tracks, and the formula to calculate the number of tracks is

$$\#primary = \frac{(\#variables \times \#cases \times 8)}{23476}$$

This is the number of tracks set aside in the primary allocation. If this is not enough, the system will get #secondary tracks and add it to the primary allocation up to 15 times.

is is the format of a generic LIBNAME statement.

```
LIBNAME libref
  'mvs-data-set-name'
  DISP=(NEW,CATLG,DELETE)
  UNIT=SYSDA
  SPACE=(TRK,(#primary,#secondary),RLSE);
```

This example will catalog a new data set named MSS.S1234.MYTHESIS. This file has just 2 variables (DOB and HIREDATE) and 249 observations. So the number of primary tracks (#primary) to be allocated is (2*249*8)/23476=.169, or less than one track. Since only whole tracks can be allocated, #primary=1.

```
  ...standard 3 lines of JCL
LIBNAME MYLIB 'MSS.S1234.MYTHESIS' UNIT=SYSDA
  DISP=(NEW,CATLG,DELETE),SPACE=(TRK,(1,1),RLSE);
DATA MYLIB.MYTHESIS;
   INPUT  @1 DOB DATE7.  @10  HIREDATE DATE7. ;
CARDS;
 ...etc.
```

Personnel

The Computer Center welcomes Mike McCann as the new manager of the Scientific Visualization Lab. As the new "Sci Vi Guy", he will be making Center isualization hardware and software usable to the S community. Mike has been working as an oceanographer for the Oceanography Department, and has produced ocean modelling videos which have appeared on CNN and Italian national television. Since Mike is filling the position last held by the legendary Steve Lamont, Mike wants us to know that he was a high school student in Yuba City when legendary Steve was a "Top 40" radio DJ there.

Micros

WordPerfect Update

The Computer Center Micro Lab has a new interim release (March '92) of WordPerfect. Here's the big news: it is the policy of WordPerfect Corp. that legal owners of WordPerfect products can copy updates from other legal owners, saving the delay and media cost of ordering updates directly from WP Corp. Thus, NPS labs wishing to update their release of WordPerfect are welcome to contact Kathy Strutynski, In-103, ext. 2696, at the Center Micro Lab.

Also of interest: WordPerfect for Sun is now shipping.

Other WordPerfect news: A WordPerfect file may develop one of the following symptoms: at a certain point in the file, your PC will freeze; or your cursor will go to the top of the file or suddenly move rapidly and uncontrollably down through a page or more of text. If the file freezes, all you can do is reboot.

Our WordPerfect liason urges people with such problems to call WordPerfect toll-free at 1-800-541-5096. Tell them the problem you're having, give them your registration number, and they'll send an update that should keep the problem from happening again.

For immediate relief, and to fix a file that's already having trouble, there is a public domain program called WPMD2, and it's available in In-113. Bring a floppy. It will also be provided with the files you receive when you type THESISA (or THESISB) in In-151. Instructions for its use are also provided, in WPMD2.DOC. Contact Larry Frazier, ext. 2671, with any questions.

Larry Frazier

G addresses the security features related to the operation of the system. This document provides a description of the protection mechanisms and how they are implemented.

b. Trusted Facility Manual (TFM): The TFM is designed to be used by the system administrator and system security officer. This manual addresses the security functions and privileges that are available and implemented on the system. The TFM also contains security procedures for the security operation of the AIS.

c. Test Documentation: All the test documentation will be provided as part of the certification process. Normally, this type of documentation is developed by the system developer. The documentation includes a description of test plans and procedures, how the security mechanisms were tested, and the results of the tests.

d. Design Documentation: The system developer documents the philosophy of protection for the system and how the hardware/software security chanisms are implemented. Design documenta- is provided for each separate security module.

Computer Security Note

The degree of security required to adequately protect an automated information system is determined by the level of information or data the system processes. The more sensitive the information, the more stringent the security requirements. When a system is accredited to operate, the level of data that system is authorized to process will be clearly specified as either Level I, Level II, or Level III. It is important, therefore, that personnel understand the differences between these three data levels:

LEVEL I (Classified). Level I is the most restrictive category of information that may be processed, and includes information of the following classifications:

- CONFIDENTIAL
- SECRET
- TOP SECRET
- SCI

When accrediting an automated information system Level I processing, the highest classification of information which that system is authorized to process must also be specified. That system may be used to process information of a lower classification than that for which accredited, but never higher. For systems processing TOP SECRET or SCI information, the Special Security Officer has cognizance.

LEVEL II (Sensitive-Unclassified). Level II information is the second most restrictive type of information. The different types of Level II information are given below:

1. Privacy Act Information - Personal information the disclosure of which could result in substantial harm, embarrassment, inconvenience or unfairness to an individual. Examples of Privacy Act information are:

- Social Security Numbers
- Home Phone Numbers or Addresses
- Credit Card Numbers
- Bank Account Numbers
- Medical Records
- Performance Evaluations

2. For Official Use Only - Requiring confidentiality of information derived from Inspector General, authority, or other investigative activity. The FOUO designation may also be assigned to information which discusses vulnerabilities of specific operating systems, computer facilities, or activities which could be exploited by unauthorized personnel.

- Results of inspections which may reveal vulnerabilities to the physical or ADP security posture of an activity or system.
- Results of investigations conducted by agents of the Naval Investigative Service, or similar law enforcement agency.
- Computer Incident Reports which describe how a particular computer system was penetrated.

3. Unclassified Naval Warfare Publications (NWPs).

4. Financial. Data which requires protection to ensure the integrity of financial management or budgetary information.

5. Sensitive Management - Data requiring protection to guard against the loss of property, material or supplies, or to protect against disruption of operations or normal management practices.

nths.

Administrative Network users share the campus backbone with other research and instruction oriented users. Figure 1 shows the current deployment of servers used by administrative users. In many cases these servers have been located in user spaces. This has been done primarily to reduce the risk and aggravation associated with potential cable plant failures. Table 1 shows the server name and type, its location, and the currently assigned administrators and user groups. Future plans call for moving users off the older Banyan DTS servers onto the more powerful 80386/486 based servers.

If you are an Administrative Network user you may have noticed the dreaded "purple message" flashing across the bottom of your screen, usually announcing the impending shut down of a file server. Our wide area network connection includes a number of servers in remote areas (e.g. Washington, D.C., and Oakland, CA) and occasionally an administrator will address these messages to a wider audience than is strictly necessary. If the message you see designates erver named "BLUE 2" or "RED 1" you generally ed not be concerned since these servers are not located at NPS. Even if the message designates one of the servers listed in Table 1 you may not be affected if you are logged into a different server. To find out which server(s) you use, type "WHATZ" at the DOS prompt.

You may easily identify the NPS network servers because they are all named after celebrated US Navy ships. The exception is the Compass Rose which was our first server and is named after the (fictional) World War II Royal Navy destroyer escort which gained fame as the "little ship that could" in Nicholas Monserrat's novel of the same name.

Joe Lopicollo has completed his training for work involving spaces where there is a danger from materials containing asbestos and is waiting to be fitted with the appropriate safety equipment. When qualified to wear the "white suit" Joe will go into the basement of Herrmann Hall, West Wing, to connect the DRMEC sub-network to the campus backbone.

ismic Moves. Due to renovations in Herrmann l prompted by the need to reinforce the structure in the event of earthquakes, Public Works was moved to temporary offices in the "study barn". Construction in the Public Works spaces is being completed this month, and the Registrar's office, Admissions Office, and Research Administration will move to the study barn while their old office area is redone. Network users will be able to stay in close (and convenient) contact with these offices via E-Mail.

Public Works. Our local Public Works department is scheduled to receive the newest version of the Base Engineering Support, Technical (BEST) system. Their current version, operating on an aging Honeywell mini-computer, will be replaced by a more modern distributed version utilizing microcomputers and our local area network. The conversion is scheduled to begin on June 19.

Network News. Administrative network users will be familiar with a new feature of our network. When they log into the network they are greeted by a message file that advises them of current events or conditions that might affect the use of the network. If you have an item of interest to these users and wish to have it publicized, please contact your network administrator.

Supply Contacts. The following Receipt Control personnel have been added to the E-Mail system. If you need to contact supply regarding the status of requisitions, orders, invoices, or payments you may now reach them electronically:

Name	E-Mail ID
Bill Hollifield	Bhollifield
Gay Halloran	Ghalloran
C.C. Reed	Creed
Joellen Knapp	Jknapp
Judy Baldino	Jbaldino

You may also correspond electronically with the purchasing team leaders if you need assistance or information regarding the ordering process:

Bob Arnold	Barnold
Linda Allen	Lallen

Michael P. Spencer

ABLE 1: Administrative Network Server Summary

Num	Server Name	Location	Administrator	Users
1	Lexington VINES 4.10(5) 80386	Spanagel 202	LT Munn	Curricular Offices
2	Ranger VINES 4.10(5) 80386	Ingersoll 278	Nancy Tiffany	Academic Depts AS, NS, EC, PH, OC, CS, MA, OR, Academic Groups
3	Constellation VINES 4.11(5) 80386	Public Works	Joe Lopiccolo	Public Works (processing for installation)
4	Midway VINES 4.11(5) 80386	Registrar He-146	Lucille Clark	MIS/CIS, Research Admin, Instruction, Library, Computer Center, Supt's Off
5	Reuben James VINES 4.00(5) Banyan DTS	Mezzanine He-M5	Nancy Tiffany	MilPers, MilOps, 04, Deanery
6	Compass Rose VINES 4.00(5) Banyan DTS	East Wing He-204E	LT Munn	Comptroller
7	Enterprise VINES 4.10(5) Banyan CNS	East Wing He-204E	Joe Lopiccolo	CPO (Public Works - temporary)
8	Saratoga VINES 4.11(5) 80496	East Wing He-204E	Joe Lopiccolo	Supply, Programs Office
9	Shark UNIX System V Sequent S-27 4 processor	East Wing He-204E	Joe Lopiccolo	Supply, Buyers